

ABSTRACT

A non-volatile memory device has a channel region between source/drain regions, a floating gate, a control gate, a first dielectric region between the channel region and the floating gate, and a second dielectric region between the floating gate and the control
5 gate. The first dielectric region includes a high-K material. The non-volatile memory device is programmed and/or erased by transferring charge between the floating gate and the control gate via the second dielectric region.